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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/799,758

**Applicant(s)**

FUNAKAWA ET AL.

**Examiner**

MARCUS T. RILEY

**Art Unit**

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 April 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-18 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-850)  
Paper No(s)/Mail Date 01/18/2008; 10/31/2005; 03/15/2004  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_



## DETAILED ACTION

### Response to Amendment

1. This office action is responsive to applicant's remarks received on April 14, 2008. **Claims 1-18** remain pending.

### Response to Arguments

2. Applicant's arguments with respect to **claims 1-18** and amended **claim 11 & 12**, filed on April 14, 2008 have been fully considered but they are not persuasive.

### A: Applicant's Remarks

*However, to meet these limitations of claim 1, Ueda must teach that it is first determined whether image data is stored in a first storage area and then, if the result of that determination is negative (i.e., the data is not stored in the first storage area), image data is acquired from an external apparatus (a storage area different than the first storage area), but if the result is positive, the image data is acquired from the first storage area. This is not what is taught by the portions of Ueda cited by the Examiner. Ueda is not teaching that if the image data to be subject to image processing is not stored in a first storage unit (the storage unit of the image processing apparatus), then the image data is acquired from the external apparatus, but if it is stored in the first storage unit, the image data is acquired from that first storage unit. Ueda actually relates to how the information is stored in first and second storage areas of a single memory resource, but not how the information is retrieved from one of two separate apparatuses or how it is determined from where the information should be retrieved, which is what is being claimed in claim 1.*

*Further, the Examiner admits that Ueda fails to teach a transmission unit that transmits the acquired image data to the external apparatus so that the transmitted image data is stored in the storage apparatus thereof. However, this is because Ueda is not teaching that the image data is stored in an external apparatus, thus there is no need to employ a transmission unit that transmits acquired image data to an external apparatus to be stored therein. Ueda clearly describes a first storage area of a memory resource and a second storage area of the memory resource (see col. 3, line 43 and 44 and lines 48 and 49). Since the first and second storage areas are in the same memory resource, there is no need to transmit acquired image data to an external apparatus. Thus, even if this feature is taught by another reference, one of ordinary skill in the art would have no reason to modify Ueda to provide the claimed transmission unit.*

*Claims 17 and 18 are allowable because they recite substantially the same features as claim 1. The remaining claims are allowable at least due to their respective dependencies and further in view of the failure of the other remaining references to overcome the deficiencies of Ueda. Applicants request that these rejections be withdrawn.*

**A: Examiner's Response**

Ueda '764 in combination with Kajita '706 does teach, disclose or suggests Applicant's claimed invention. Ueda discloses where it is first determined whether image data is stored in a first storage area and then, if the result of that determination is negative and if the result is positive, the image data is acquired from the first storage area. See rejections below...

**Regarding claim 1;** Ueda '764 discloses an image processing apparatus for transmitting and receiving data to/from an external apparatus that has a storage apparatus, the image

processing apparatus comprising: a first data acquiring unit that acquires image data to be subjected to image processing (“...*data processing means for acquiring information concerning image data development area size allocated in the memory resource of the printing apparatus...*” column 3, lines 40-45); a storage unit that stores the acquired image data (“...*first storage means for storing, in a first storage area of a memory resource, the intermediate code information obtained through conversion performed by the first conversion means...*” column 10, lines 51-54); a judgment unit that judges, prior to commencement of the image processing, whether the image data is stored in the storage unit (“...*first judging means for judging whether or not the intermediate code information corresponding to one page has been stored in the first storage area; and first memory control means operative based on the result of judgment conducted by the first judging means so as to cause the second conversion means to convert the intermediate code information stored in the first storage area on the predetermined band basis into image and to develop the image in the second storage area...*” column 3, lines 51-60); a second data acquiring unit that acquires the image data from the external apparatus if the judgment unit judges negatively (“...*second memory control means operative after the preservation of the vacant area by the first memory control means and operative based on the result of the judgment performed by the first judging means, so as to cause the second conversion means to convert into image the intermediate code information of a band which does not contain image data from among the bands of intermediate code information stored in the first storage area, and to develop the image into the second storage area...*” column 3, lines 63-67 thru column 4, lines 1-4); and an image processing unit that executes the image processing using the image data stored in the storage unit if the judgment unit judges positively, and

executes the image processing using the image data acquired by the second data acquiring unit if the judgment unit judges negatively (*"...first conversion means for converting page-basis printing information received from the information processing apparatus into predetermined intermediate code information, the conversion being executed on a predetermined band basis; first storage means for storing, in a first storage area of a memory resource, the intermediate code information obtained through conversion performed by the first conversion means; second conversion means for converting the intermediate code information into image data on a predetermined band basis; second storage means for storing, in a second storage area of the memory resource, a plurality of bands of the image data obtained through conversion performed by the second conversion means; first judging means for judging whether or not the intermediate code information corresponding to one page has been stored in the first storage area; and first memory control means operative based on the result of judgment conducted by the first judging means so as to cause the second conversion means to convert the intermediate code information stored in the first storage area on the predetermined band basis into image and to develop the image in the second storage area, thereby forming a vacant area in the first storage area."* column 3, lines 38-59).

Further, Kajita '706 discloses a transmission unit that transmits the acquired image data to the external apparatus so that the transmitted image data is stored in the storage apparatus thereof (*"In case the copying apparatus 1 is used as a remote scanner, the original placed on the unrepresented original table is scanned with the scanner unit 12 to obtain electrical signals, which are transmitted through the selector 13, and subjected to various digital image processes in the image process unit 14, and thus processed image data 16 are stored as a raster image in*

*the image memory 9. Then the image data, read from the image memory 9, are supplied through the CPU 8 and the external communication circuit 4 and transmitted for example to the computer 2A under the control of the control unit 5.” column 5, lines 1-11).*

Claims 17 and 18 are not allowable because they recite substantially the same features as claim 1. The remaining claims are also not allowable due to their respective dependencies. Thus, Applicant’s arguments with respect to **claims 1-18** and amended **claim 11 & 12** have been fully considered but they are not persuasive.

#### **Claim Objections**

*(The previous claim 11&12 objections are withdrawn in light of the applicant’s amendments.)*

#### **Claim Rejections - 35 USC § 103**

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 3-6, 11, 12, 17, 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda (US 6,538,764 B2, hereinafter Ueda ‘764) in combination with Kajita et al. (US 6,069,706, hereinafter Kajita ‘706).



**Regarding claim 1;** Ueda '764 discloses an image processing apparatus for transmitting and receiving data to/from an external apparatus that has a storage apparatus, the image processing apparatus comprising: a first data acquiring unit that acquires image data to be subjected to image processing (*"...data processing means for acquiring information concerning image data development area size allocated in the memory resource of the printing apparatus..."* column 3, lines 40-45); a storage unit that stores the acquired image data (*"...first storage means for storing, in a first storage area of a memory resource, the intermediate code information obtained through conversion performed by the first conversion means..."* column 10, lines 51-54); a judgment unit that judges, prior to commencement of the image processing, whether the image data is stored in the storage unit (*"...first judging means for judging whether or not the intermediate code information corresponding to one page has been stored in the first storage area; and first memory control means operative based on the result of judgment conducted by the first judging means so as to cause the second conversion means to convert the intermediate code information stored in the first storage area on the predetermined band basis into image and to develop the image in the second storage area..."* column 3, lines 51-60); a second data acquiring unit that acquires the image data from the external apparatus if the judgment unit judges negatively (*"...second memory control means operative after the preservation of the vacant area by the first memory control means and operative based on the result of the judgment performed by the first judging means, so as to cause the second conversion means to convert into image the intermediate code information of a band which does not contain image data from among the bands of intermediate code information stored in the first storage area, and to develop the image into the second storage area..."* column 3, lines 63-

67 thru column 4, lines 1-4); and an image processing unit that executes the image processing using the image data stored in the storage unit if the judgment unit judges positively, and executes the image processing using the image data acquired by the second data acquiring unit if the judgment unit judges negatively (*"...first conversion means for converting page-basis printing information received from the information processing apparatus into predetermined intermediate code information, the conversion being executed on a predetermined band basis; first storage means for storing, in a first storage area of a memory resource, the intermediate code information obtained through conversion performed by the first conversion means; second conversion means for converting the intermediate code information into image data on a predetermined band basis; second storage means for storing, in a second storage area of the memory resource, a plurality of bands of the image data obtained through conversion performed by the second conversion means; first judging means for judging whether or not the intermediate code information corresponding to one page has been stored in the first storage area; and first memory control means operative based on the result of judgment conducted by the first judging means so as to cause the second conversion means to convert the intermediate code information stored in the first storage area on the predetermined band basis into image and to develop the image in the second storage area, thereby forming a vacant area in the first storage area."* column 3, lines 38-59).

Ueda '764 does not expressly disclose a transmission unit that transmits the acquired image data to the external apparatus so that the transmitted image data is stored in the storage apparatus thereof.

Kajita '706 discloses a transmission unit that transmits the acquired image data to the external apparatus so that the transmitted image data is stored in the storage apparatus thereof (*"In case the copying apparatus 1 is used as a remote scanner, the original placed on the unrepresented original table is scanned with the scanner unit 12 to obtain electrical signals, which are transmitted through the selector 13, and subjected to various digital image processes in the image process unit 14, and thus processed image data 16 are stored as a raster image in the image memory 9. Then the image data, read from the image memory 9, are supplied through the CPU 8 and the external communication circuit 4 and transmitted for example to the computer 2A under the control of the control unit 5."* column 5, lines 1-11).

Ueda '764 and Kajita '706 are combinable because they are from same field of endeavor of an image processing apparatus (*"The present invention relates to an image reading device for reading an image and sending image data to an externally connected host computer or the like, and an image processing method utilizing such device"* Kajita '706 at column 1, lines 8-11).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image processing apparatus as taught by Ueda '764 by adding a transmission unit that transmits the acquired image data to the external apparatus so that the transmitted image data is stored in the storage apparatus thereof as taught by Kajita '706.

The motivation for doing so would have been because it advantageous to provide an image reading device with improved operation characteristics (*"...to provide an image reading device with improved operation characteristics."* Kajita '706 at column 2, lines 25-27).

Therefore, it would have been obvious to combine Ueda '764 with Kajita '706 to obtain the invention as specified in claim 1.

**Regarding claim 3;** Ueda '764 discloses where the transmission unit transmits the acquired image data page by page to the external apparatus (*"The communication between the host computer 1500 and the printer 2500 may be executed such that, when one-page printing information is to be transferred from the host computer 1500 to the printer 2500, the host computer sends first the printing information except for any image data to the printer 2500, so as to start the development of the printing information into the intermediate code memory 501. Then, an inquiry command requesting information about the size of the vacant area left in the intermediate code memory 501 after the execution is transmitted from the host computer 1500 to the printer 2500."* column 26, lines 12-22).

**Regarding claim 4;** Ueda '764 discloses where the storage unit has a capacity only sufficient to store one page of the image data, and each time the image processing unit completes image processing for one page of the image data stored in the storage unit, the second data acquiring unit acquires from the external apparatus another one page of the image data to be subjected to the image processing next (*"...first conversion means for converting page-basis printing information received from the information processing apparatus into predetermined intermediate code information, the conversion being executed on a predetermined band basis; first storage means for storing, in a first storage area of a memory resource, the intermediate code information obtained through conversion performed by the first conversion mean..."* column 3, lines 38-44).

**Regarding claim 5;** Ueda '764 discloses a memory that stores information regarding progress of the image processing, wherein when executing the image processing using the image data acquired by the second data acquiring unit, the image processing unit refers to the

information stored in the memory and executes the image processing for a part of the image data that has not been subjected to the image processing yet (*"...second memory control means operative after the preservation of the vacant area by the first memory control means and operative based on the result of the judgment performed by the first judging means, so as to cause the second conversion means to convert into image the intermediate code information of a band which does not contain image data from among the bands of intermediate code information stored in the first storage area, and to develop the image into the second storage area..."* column 3, lines 63-67 thru column 4, lines 1-4).

**Regarding claim 6;** Ueda '764 discloses where the information stored in the memory indicates pages of the image data that have already been subjected to the image processing (*"...first conversion means for converting page-basis printing information received from the information processing apparatus into predetermined intermediate code information, the conversion being executed on a predetermined band basis; first storage means for storing, in a first storage area of a memory resource, the intermediate code information obtained through conversion performed by the first conversion mean..."* column 3, lines 38-44).

**Regarding claim 11;** Ueda '764 discloses where the judgment unit judges whether the image data is stored in the storage unit each time power is turned on and/or each time the image processing apparatus recovers from a power failure (*"...second memory control means operative after the preservation of the vacant area by the first memory control means and operative based on the result of the judgment performed by the first judging means, so as to cause the second conversion means to convert into image the intermediate code information of a band which does not contain image data from among the bands of intermediate code information stored in the*

*first storage area, and to develop the image into the second storage area...*" column 3, lines 63-67 thru column 4, lines 1-4).

**Regarding claim 12;** Ueda '764 discloses a reception unit that receives image processing jobs each of which contains information specifying a start time at which an image processing job is to be subjected to the image processing (*"According to the first aspect of the present invention, there is provided a printing apparatus communicable with an information processing apparatus through a predetermined communication medium, comprising: first conversion means for converting page-basis printing information received from the information processing apparatus into predetermined intermediate code information, the conversion being executed on a predetermined band basis..."* column 3, lines 35-42); and a start time judging unit that judges, each time power is turned on and/or each time the image processing apparatus recovers from a power failure, whether any of the image processing jobs received by the reception unit has a start time that has already reached, wherein if the judgment unit judges negatively, and if there is an image processing job that has been judged by the start time judging unit as having a start time that has already reached, the second data acquiring unit acquires image data for the image processing job from the external apparatus earlier than image data for the remaining image processing jobs received by the reception unit (*"According to the first aspect of the present invention, there is provided a printing apparatus communicable with an information processing apparatus through a predetermined communication medium, comprising: first conversion means for converting page-basis printing information received from the information processing apparatus into predetermined intermediate code information, the conversion being executed on a predetermined band basis; first storage means for storing, in a first storage area of a memory*

*resource, the intermediate code information obtained through conversion performed by the first conversion means; second conversion means for converting the intermediate code information into image data on a predetermined band basis; second storage means for storing, in a second storage area of the memory resource, a plurality of bands of the image data obtained through conversion performed by the second conversion means; first judging means for judging whether or not the intermediate code information corresponding to one page has been stored in the first storage area; and first memory control means operative based on the result of judgment conducted by the first judging means so as to cause the second conversion means to convert the intermediate code information stored in the first storage area on the predetermined band basis into image and to develop the image in the second storage area, thereby forming a vacant area in the first storage area. In accordance with the second aspect of the present invention, the printing apparatus of the first aspect further comprises: second memory control means operative after the preservation of the vacant area by the first memory control means and operative based on the result of the judgment performed by the first judging means, so as to cause the second conversion means to convert into image the intermediate code information of a band which does not contain image data from among the bands of intermediate code information stored in the first storage area, and to develop the image into the second storage area; compression means for compressing the output information image-developed by the second memory control means into a predetermined volume, thereby generating compressed output information; and third memory control means for causing the first storage area to store the compressed output information generated by the compression means.” column 3, lines 35-67 thru column 4, lines 1-10).*

**Regarding claim 17;** Ueda '764 discloses an image processing method for use in an image processing apparatus that is operable to transmit and receive data to/from an external apparatus that has a storage apparatus, the image processing method comprising: a first data acquiring step for acquiring image data to be subjected to image processing (*"...data processing means for acquiring information concerning image data development area size allocated in the memory resource of the printing apparatus..."* column 3, lines 40-45); a storage step for storing the acquired image data (*"...first storage means for storing, in a first storage area of a memory resource, the intermediate code information obtained through conversion performed by the first conversion means..."* column 10, lines 51-54); a judgment step for judging, prior to commencement of the image processing, whether the image data is stored in the storage unit (*"...first judging means for judging whether or not the intermediate code information corresponding to one page has been stored in the first storage area; and first memory control means operative based on the result of judgment conducted by the first judging means so as to cause the second conversion means to convert the intermediate code information stored in the first storage area on the predetermined band basis into image and to develop the image in the second storage area..."* column 3, lines 51-60); a second data acquiring step for acquiring the image data from the external apparatus if the judgment unit judges negatively (*"...second memory control means operative after the preservation of the vacant area by the first memory control means and operative based on the result of the judgment performed by the first judging means, so as to cause the second conversion means to convert into image the intermediate code information of a band which does not contain image data from among the bands of intermediate code information stored in the first storage area, and to develop the image into the second*



*storage area..." column 3, lines 63-67 thru column 4, lines 1-4); and an image processing step for executing the image processing using the image data stored in the storage unit if the judgment unit judges positively, and executing the image processing using the image data acquired by the second data acquiring unit if the judgment unit judges negatively ("...first conversion means for converting page-basis printing information received from the information processing apparatus into predetermined intermediate code information, the conversion being executed on a predetermined band basis; first storage means for storing, in a first storage area of a memory resource, the intermediate code information obtained through conversion performed by the first conversion means; second conversion means for converting the intermediate code information into image data on a predetermined band basis; second storage means for storing, in a second storage area of the memory resource, a plurality of bands of the image data obtained through conversion performed by the second conversion means; first judging means for judging whether or not the intermediate code information corresponding to one page has been stored in the first storage area; and first memory control means operative based on the result of judgment conducted by the first judging means so as to cause the second conversion means to convert the intermediate code information stored in the first storage area on the predetermined band basis into image and to develop the image in the second storage area, thereby forming a vacant area in the first storage area." column 3, lines 38-59).*

Ueda '764 does not expressly disclose a transmission step for transmitting the acquired image data to the external apparatus so that the transmitted image data is stored in the storage apparatus.

Kajita '706 a transmission step for transmitting the acquired image data to the external apparatus so that the transmitted image data is stored in the storage apparatus (*"In case the copying apparatus 1 is used as a remote scanner, the original placed on the unrepresented original table is scanned with the scanner unit 12 to obtain electrical signals, which are transmitted through the selector 13, and subjected to various digital image processes in the image process unit 14, and thus processed image data 16 are stored as a raster image in the image memory 9. Then the image data, read from the image memory 9, are supplied through the CPU 8 and the external communication circuit 4 and transmitted for example to the computer 2A under the control of the control unit 5."* column 5, lines 1-11).

Ueda '764 and Kajita '706 are combinable because they are from same field of endeavor of an image processing apparatus (*"The present invention relates to an image reading device for reading an image and sending image data to an externally connected host computer or the like, and an image processing method utilizing such device"* Kajita '706 at column 1, lines 8-11).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image processing apparatus as taught by Ueda '764 by adding a transmission step for transmitting the acquired image data to the external apparatus so that the transmitted image data is stored in the storage apparatus as taught by Kajita '706.

The motivation for doing so would have been because it advantageous to provide an image reading device with improved operation characteristics (*"...to provide an image reading device with improved operation characteristics."* Kajita '706 at column 2, lines 25-27).

Therefore, it would have been obvious to combine Ueda '764 with Kajita '706 to obtain the invention as specified in claim 17.

**Regarding claim 18;** Ueda '764 discloses a program that is run in an image processing apparatus that is operable to transmit and receive data to/from an external apparatus that has a storage apparatus, the program causing the image processing apparatus to execute: a first data acquiring step for acquiring image data to be subjected to image processing (*"...data processing means for acquiring information concerning image data development area size allocated in the memory resource of the printing apparatus..."* column 3, lines 40-45); a storage step for storing the acquired image data (*"...first storage means for storing, in a first storage area of a memory resource, the intermediate code information obtained through conversion performed by the first conversion means..."* column 10, lines 51-54); a judgment step for judging, prior to commencement of the image processing, whether the image data is stored in the storage unit (*"...first judging means for judging whether or not the intermediate code information corresponding to one page has been stored in the first storage area; and first memory control means operative based on the result of judgment conducted by the first judging means so as to cause the second conversion means to convert the intermediate code information stored in the first storage area on the predetermined band basis into image and to develop the image in the second storage area..."* column 3, lines 51-60); a second data acquiring step for acquiring the image data from the external apparatus if the judgment unit judges negatively (*"...second memory control means operative after the preservation of the vacant area by the first memory control means and operative based on the result of the judgment performed by the first judging means, so as to cause the second conversion means to convert into image the intermediate code information of a band which does not contain image data from among the bands of intermediate code information stored in the first storage area, and to develop the image into the second*

*storage area..." column 3, lines 63-67 thru column 4, lines 1-4); an image processing step for executing the image processing using the image data stored in the storage unit if the judgment unit judges positively, and executing the image processing using the image data acquired by the second data acquiring unit if the judgment unit judges negatively ("...first conversion means for converting page-basis printing information received from the information processing apparatus into predetermined intermediate code information, the conversion being executed on a predetermined band basis; first storage means for storing, in a first storage area of a memory resource, the intermediate code information obtained through conversion performed by the first conversion means; second conversion means for converting the intermediate code information into image data on a predetermined band basis; second storage means for storing, in a second storage area of the memory resource, a plurality of bands of the image data obtained through conversion performed by the second conversion means; first judging means for judging whether or not the intermediate code information corresponding to one page has been stored in the first storage area; and first memory control means operative based on the result of judgment conducted by the first judging means so as to cause the second conversion means to convert the intermediate code information stored in the first storage area on the predetermined band basis into image and to develop the image in the second storage area, thereby forming a vacant area in the first storage area." column 3, lines 38-59).*

Ueda '764 does not expressly disclose a transmission step for transmitting the acquired image data to the external apparatus so that the transmitted image data is stored in the storage apparatus.

Kajita '706 discloses a transmission step for transmitting the acquired image data to the external apparatus so that the transmitted image data is stored in the storage apparatus (*"In case the copying apparatus 1 is used as a remote scanner, the original placed on the unrepresented original table is scanned with the scanner unit 12 to obtain electrical signals, which are transmitted through the selector 13, and subjected to various digital image processes in the image process unit 14, and thus processed image data 16 are stored as a raster image in the image memory 9. Then the image data, read from the image memory 9, are supplied through the CPU 8 and the external communication circuit 4 and transmitted for example to the computer 2A under the control of the control unit 5."* column 5, lines 1-11).

Ueda '764 and Kajita '706 are combinable because they are from same field of endeavor of an image processing apparatus (*"The present invention relates to an image reading device for reading an image and sending image data to an externally connected host computer or the like, and an image processing method utilizing such device"* Kajita '706 at column 1, lines 8-11).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image processing apparatus as taught by Ueda '764 by adding a transmission step for transmitting the acquired image data to the external apparatus so that the transmitted image data is stored in the storage apparatus as taught by Kajita '706.

The motivation for doing so would have been because it advantageous to provide an image reading device with improved operation characteristics (*"...to provide an image reading device with improved operation characteristics."* Kajita '706 at column 2, lines 25-27).

Therefore, it would have been obvious to combine Ueda '764 with Kajita '706 to obtain the invention as specified in claim 18.

5. **Claims 2, 7, 10 and 13-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ueda '764 and Kajita '706 as applied to claim 1 above, and further in view of Kajita '706.

**Regarding claim 2;** Ueda '764 and Kajita '706 as modified does not expressly disclose a deletion instructing unit that, after the image processing is completed, sends to the external apparatus an instruction to delete the image data from the storage apparatus.

Kajita '706 discloses a deletion instructing unit that, after the image processing is completed, sends to the external apparatus an instruction to delete the image data from the storage apparatus ("*Then a step S34 deletes the print request, for which the printing operation has been completed, from the reception list and also deletes the print data on the hard disk 7.*" column 11, lines 1-4).

Ueda '764 and Kajita '706 are combinable with Kajita '706 because they are from same field of endeavor of an image processing apparatus ("*The present invention relates to an image reading device for reading an image and sending image data to an externally connected host computer or the like, and an image processing method utilizing such device*" Kajita '706 at column 1, lines 8-11).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image processing apparatus as taught by Ueda '764 and Kajita '706 by adding a deletion instructing unit that, after the image processing is completed, sends to the external apparatus an instruction to delete the image data from the storage apparatus as taught by Kajita '706.

The motivation for doing so would have been because it advantageous to provide an image reading device with improved operation characteristics (“...to provide an image reading device with improved operation characteristics.” Kajita ‘706 at column 2, lines 25-27).

Therefore, it would have been obvious to combine Ueda ‘764 and Kajita ‘706 with Kajita ‘706 to obtain the invention as specified in claim 1.

**Regarding claim 7;** Kajita ‘706 discloses where the memory is a nonvolatile memory (“For these reasons, the volatile DRAM is used for the image memory requiring high speed and non-volatile hard disk is used for storing the data obtained by image reading and those for printing. However the image memory 9 may be composed of a high-speed non-volatile memory if such memory becomes available in the future.” column 10, lines 50-56).

**Regarding claim 10;** Kajita ‘706 discloses where the storage unit is a volatile memory (“For these reasons, the volatile DRAM is used for the image memory requiring high speed and non-volatile hard disk is used for storing the data obtained by image reading and those for printing. However the image memory 9 may be composed of a high-speed non-volatile memory if such memory becomes available in the future.” column 10, lines 50-56).

**Regarding claim 13;** Kajita ‘706 discloses where the image processing is an image forming process (“FIG. 3 is a block diagram of the copying apparatus 1 in the first embodiment of the present invention. In case the copying apparatus 1 is used as a local copying machine, the original placed on an unrepresented original table is scanned with a scanner unit 12 to obtain electrical signals, which are transmitted through a selector 13, subjected to various digital

*image processes in an image process unit 14 and subjected to image formation in a printer unit 15,” column 4, lines 51-58).*

**Regarding claim 14;** Kajita ‘706 discloses where the image processing is a fax transmission process (*“In the scanning process for reading an image to be transferred to a user on the LAN, there is at first detected the depression of a scanning key in the operation unit 112 (different from the instruction for ordinary copying or for reading the original for facsimile transmission) (step S101).”* column 18, lines 8-12).

**Regarding claim 15;** Kajita ‘706 discloses where the first data acquiring unit is a receiving unit that receives print data from an external terminal connected with the image processing apparatus via a network (*“FIG. 2 is a view showing the entire configuration of an image reading system constituting a first embodiment of the present invention. A copying apparatus 1 is a composite machine provided, in addition to the known function of reading and printing the original image, with a remote scanner function of transmitting the read image to the exterior and a printer function of printing the image received from the exterior. The copying apparatus 1 is connected with other computers with a network 3.”* column 4, lines 10-18).

6. **Claims 8 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ueda ‘764 and Kajita ‘706 as applied to claim 1 above, and further in view of Iwazaki (US 6,687,742 B1 hereinafter, Iwazaki ‘742).

**Regarding claim 8;** Ueda ‘764 and Kajita ‘706 does not expressly disclose where the external apparatus functions as a mail server, the transmission unit transmits to the external apparatus an electronic mail addressed to the image processing apparatus and containing the



acquired image data, and the second data acquiring unit, if the judgment unit judges negatively, acquires the electronic mail from the external apparatus and extracts the image data from the acquired electronic mail.

Iwazaki '742 discloses where the external apparatus functions as a mail server, the transmission unit transmits to the external apparatus an electronic mail addressed to the image processing apparatus and containing the acquired image data, and the second data acquiring unit, if the judgment unit judges negatively, acquires the electronic mail from the external apparatus and extracts the image data from the acquired electronic mail (*"The Internet facsimile 3 and the personal computer 4 are each designed to receive an e-mail by acquiring the e-mail that has been delivered to the local mail box in the e-mail server 5, whereas the Internet facsimiles 6 to 8 and the personal computer are each designed to receive an e-mail by acquiring the e-mail that has been delivered to the local mail box in the e-mail server 10. Note that the e-mail servers may be set to directly transfer an e-mail to an Internet facsimile and personal computer."* column 5, lines 18-26).

Ueda '64 and Kajita '706 are combinable with Iwazaki '742 because they are from same field of endeavor of an image processing apparatus (*"...it is an object of the present invention to provide a communication control method for an electronic mail system, which, in a case of transmitting an image in the form of an e-mail to a transmission destination whose capability is unknown..."* Iwazaki '742 at column 3, lines 13-17).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image processing apparatus as taught by Ueda '64 and Kajita '706 by adding where the external apparatus functions as a mail server, the transmission unit transmits to

the external apparatus an electronic mail addressed to the image processing apparatus and containing the acquired image data, and the second data acquiring unit, if the judgment unit judges negatively, acquires the electronic mail from the external apparatus and extracts the image data from the acquired electronic mail as taught by Iwazaki '742.

The motivation for doing so would have been because it advantageous to provide a communication control method for an electronic mail system, ("*...to provide a communication control method for an electronic mail system...*" Iwazaki '742 at column 3, lines 13-15).

Therefore, it would have been obvious to combine Ueda '764 and Kajita '706 with Iwazaki '742 to obtain the invention as specified in claim 1.

**Regarding claim 9;** Iwazaki '742 discloses where the transmission unit converts the acquired image data into Tag Image File Format, and transmits to the external apparatus an electronic mail addressed to the image processing apparatus and containing the image data having been converted into Tag Image File Format, as an attached file ("*RFC 2305 fixes conditions for image transmission (the number of horizontal pixels: 1728 pixels, resolution: 200.times.100 dpi or 200.times.200 dpi and coding system: MH) and defines that an image is converted to a file of the TIFF (Tagged Image File Format) format, attaches this file to an e-mail message according to the MIME (Multipurpose Internet Mail Extensions), the standard e-mail format, and this e-mail message is then transmitted to a designated e-mail address.*" column 1, lines 28-36).

7. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ueda '764 and Kajita '706 as applied to claim 1 above, and further in view of Ogura '136 et al. (US 6,961,136 B2 hereinafter, Ogura '136).

**Regarding claim 16;** Ueda '764 and Kajita '706 does not expressly disclose where the first data acquiring unit is a fax receiving unit that receives fax data from an external fax apparatus.

Ogura '136 discloses where the first data acquiring unit is a fax receiving unit that receives fax data from an external fax apparatus (*"An image -forming-device management system enables each image -forming device installed in a large number of customer offices and the like to connect to a central management device installed in a service center by using a data communication device and a communication line such as a public line or an exclusive line. This image -forming device is defined as a copy machine, a printer, a facsimile device, or the like. Additionally, the central management device carries out remote management of the image -forming device through the communication line and the data communication device (a line adaptor). Such an image -forming-device management system is generally known."* column 1, lines 16-27).

Ueda '764 and Kajita '706 are combinable with Ogura '136 because they are from same field of endeavor of an image processing apparatus (*"...The present invention relates to a data communication device, an image-forming device such as a copy machine or a facsimile composite device, an image-forming-device management system composed of the data communication device and the image-forming device, and a method of controlling power supply in the image-forming-device management system."* Ogura '136 at column 1, lines 8-14).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image processing apparatus as taught by Ueda '764 and Kajita '706 by

adding where the first data acquiring unit is a fax receiving unit that receives fax data from an external fax apparatus as taught by Ogura '136.

The motivation for doing so would have been because it advantageous to reduce unnecessary electricity consumed by the data communication device or the image-forming device ("*...the data communication device or the data -forming device can carry out data transmission regularly, reducing unnecessary electricity consumed by the data communication device or the image-forming device.*" Ogura '136 at column 7, lines 52-55).

Therefore, it would have been obvious to combine Ueda '764 and Kajita '706 with Ogura '136 to obtain the invention as specified in claim 1.

#### **Conclusion**

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARCUS T. RILEY whose telephone number is (571)270-1581. The examiner can normally be reached on Monday - Friday, 7:30-5:00, est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler L. Haskins can be reached on 571-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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